

IN THE CLAIMS

Please amend the claim as follows.

Claims 1-27 (canceled)

28. (New) A wrist worn heart rate variability monitor, comprising:

at least two electrical contacts for detecting analog electrical signals generated within a user's body when placed in contact with the body;

a circuit that conditions the electrical signals and converts the analog electrical signals to digital signal data;

a heart rate variability signal processor that monitors and analyzes the digital signal data for a defined time interval, and calculates parameters comprising the mean digital signal value and at least one standard deviation of the digital signal data monitored and analyzed over the defined time interval, and wherein the processor performs at least one heart rate variability test; and

a memory that stores at least the parameters.

29. (New) The monitor of claim 28, wherein the processor performs at least one heart rate variability test including comparison of the digital signal data against the calculated parameters.

30. (New) The monitor of claim 28, wherein the analog electrical signals are generated by the body's heart.

31. (New) The monitor of claim 28, wherein the parameters are awake parameters calculated over the defined time interval comprising the mean awake heart rate value and at least one standard deviation thereof.

32. (New) The monitor of claim 28, wherein the parameters are non-REM parameters calculated over the defined time comprising the mean non-REM heart rate value and at least one standard deviation thereof.

33. (New) The monitor of claim 28, wherein the parameters are REM parameters calculated over the defined time comprising the mean REM heart rate value and at least one standard deviation thereof.

34. (New) The monitor of claim 28, wherein the processor calculates awake parameters comprising the mean awake heart rate value and at least one standard deviation thereof over a defined time interval, performs at least one heart rate variability test using the awake parameters and recognizes when the user has entered non-REM sleep.

35. (New) The monitor of claim 34, wherein the processor further calculates non-REM parameters comprising the mean awake heart rate value and at least one standard deviation thereof over a defined time interval, performs at least one heart rate variability test using the non-REM parameters and recognizes when the user has either become awake or entered REM sleep.

36. (New) The monitor of claim 35, wherein the processor recognizes REM sleep and calculates REM parameters comprising the mean REM heart rate value and at least one standard deviation thereof over a defined time interval, performs at least one heart rate variability test using the REM parameters and recognizes when the user exits REM sleep.

37. (New) The monitor of claim 28, further comprising a processor that is capable of performing the at least one heart rate variability test while the user is awake and resting.

38. (New) The monitor of claim 28, further comprising a processor that is capable of performing the at least one heart rate variability test while the user is physically active.

39. (New) The monitor of claim 28, further comprising a processor capable of performing at least one heart rate variability test to determine when the user has fallen asleep and performing at least one heart rate variability test during the user's sleep period.

40. (New) The monitor of claim 28, further comprising a timer, wherein the timer times the duration of the monitoring of the digital signal data and time stamps the digital signal data.

41. (New) The monitor of claim 40, wherein the timer further times the duration of the at least one heart rate variability test.

42. (New) The monitor of claim 29, further comprising a waking prompt and wherein the processor recognizes REM sleep based upon the at least one heart rate variability test, and wherein the waking prompt is activated upon recognition of REM sleep.

43. (New) The monitor of claim 42, wherein the processor recognizes REM sleep based on the at least one heart rate variability test, discerns and counts REM sleep cycles and wherein the waking prompt is activated after a specified number of REM sleep cycles are completed by the user.

44. (New) The monitor of claim 29, further comprising detection of at least one sleep apnea event based upon the at least one heart rate variability test.

45. (New) The monitor of claim 44, further comprising a waking prompt that is activated when a sleep apnea event is detected.

46. (New) The monitor of claim 28, wherein the monitor further comprises a back surface, a conductive membrane disposed on at least part of the back surface of the monitor and having contact with the user's skin to increase the ability of the monitor to detect the analog electrical signals.

47. (New) The monitor of claim 46, further comprising the conductive membrane being porous.

48. (New) The monitor of claim 47, further comprising conductive gel, the conductive gel being applied to the conductive membrane and incorporated into the conductive membrane pores to increase the monitor's ability to detect the analog electrical signals.

49. (New) The apparatus of claim 29, for the control of appliances installed in each room, comprising: home information transmission paths from the wrist worn heart rate variability monitor to each room; at least one home control unit receiver, connectable to the transmission paths, installed in selected rooms for transmitting and receiving information along the transmission paths, the wrist worn heart rate variability monitor capable of transmitting an awake signal or a sleep signal to the at least one home control unit receiver based upon heart rate variability data; a central home control unit, connectable to the transmission paths, the at least one home control unit receiver and to appliances in the rooms, whereby the control unit receives the awake or sleep signal transmitted by the at least one control unit receiver, wherein when an awake signal is transmitted to the appliances by the computer, the appliances are turned on and when a sleep signal is transmitted by the computer, the appliances are turned off.

50. (New) The apparatus of claim 49, further comprising the home information transmission pathways capable of receiving wireless transmission from the monitor, the pathways wirelessly transmitting the wake or sleep signal to the central home control unit and the pathways wirelessly transmitting the wake or sleep signal to the home appliances.

51. (New) The apparatus of claim 49, further comprising the home information transmission pathways capable of receiving electronic transmission of wake or sleep signal from the monitor, the pathways electronically transmitting the wake or sleep signal to the central home control unit and the pathways electronically transmitting the wake or sleep signal to the home appliances.